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CITATION:

Abwe, Ekwoge E. ...[et al]. <Note> The Ebo forest: Four years of preliminary research and conservation of the Nigeria-Cameroon chimpanzee (*Pan troglodytes vellerosus*). *Pan Africa News* 2008, 15(2): 26-29

ISSUE DATE:

2008-12

URL:

<http://hdl.handle.net/2433/143494>

RIGHT:

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<NOTE>

The Ebo forest: Four years of preliminary research and conservation of the Nigeria-Cameroon chimpanzee (*Pan troglodytes vellerosus*)

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INTRODUCTION

Cameroon harbours four great ape subspecies separated by the Sanaga River, which is an important biogeographical barrier¹. To the south are the sympatric western lowland gorilla (*Gorilla gorilla gorilla*) and central chimpanzee (*Pan troglodytes troglodytes*) and to north the Cross River gorilla (*G. g. diehli*) and the recently distinguished Nigeria-Cameroon chimpanzee subspecies (*P. t. vellerosus*)^{1,2}. The Nigeria-Cameroon chimpanzee is the least studied of the four currently recognised chimpanzee subspecies with the only current long-term study being that in the Gashaka Gumti National Park in Nigeria — a dry sub Saharan Guinea zone³. Very little information is available on this subspecies in the closed canopy primary forests of Cameroon.

This report aims to introduce the four years of the Ebo Forest Research Project (EFRP) which has the objectives for research and conservation of the Nigeria-Cameroon chimpanzees in the Ebo forest located in the south-western part of Cameroon.

METHODS

Research site

The Ebo forest extends over 2,000 km² of closed canopy primary forests in the biodiversity 'hotspot' between the Cross River in Nigeria and the Sanaga River in Cameroon (Fig. 1). The forest harbours eleven diurnal primate species including the Nigeria-Cameroon chimpanzee and a small population of gorillas of uncertain taxonomic affinity². Many small villages surround the Ebo forest, which until the late 1950s and early 1960s was inhabited mostly by the people of the Banen and Bassa tribes. Bushmeat hunting and trade are the main economic activities in these villages, and this has been facilitated by a network of logging roads especially in the southern part of the forest. Following results of preliminary surveys carried out in 2002, a permanent research station was set up in the Ebo forest by the Zoological Society of San Diego in April 2005 (Fig. 2).

Procedure

Line transects and pre-existing human and elephant trails were used to determine chimpanzee and gorilla distribution and ranging patterns. Basic ecological data was collected by indirect means, from beds and faecal remains. Monthly observational censuses were conducted along each transect and trail, noting primate/mammal signs, feeding remains and human signs. Faecal samples collected within the study area were washed in 1 mm mesh metal sieves to distinguish the large seeds, other plant and animal matter ingested by the apes⁴.

Our outreach program targeted all age groups in most of the villages around the Ebo forest. It consisted of sporadic hunter training workshops, primate film shows, formal and informal education programs in schools and villages.

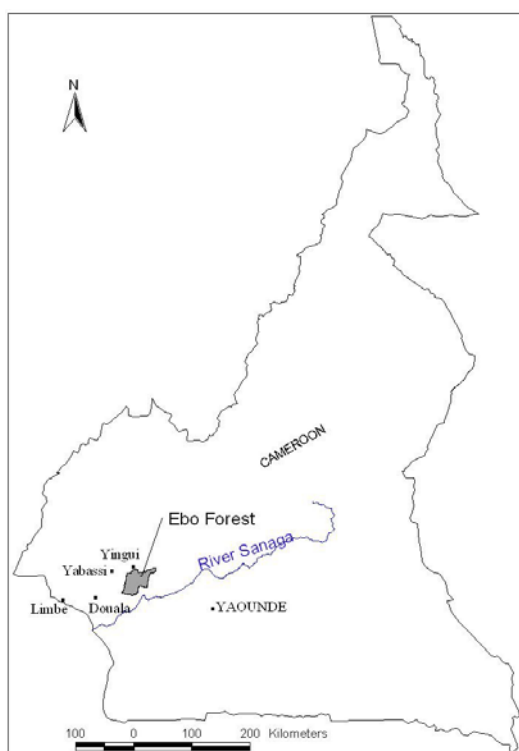


Fig. 1. Location of the Ebo forest in Cameroon.

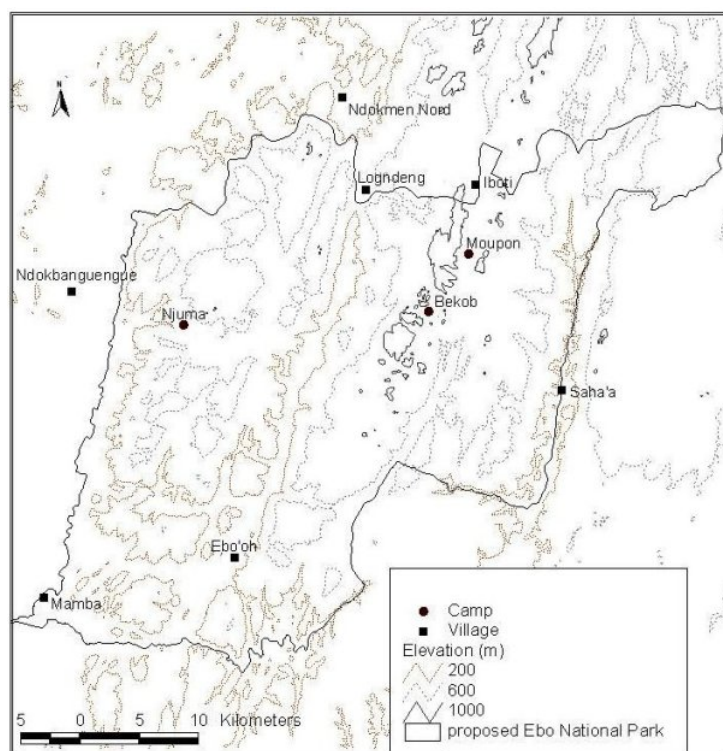


Fig. 2. The Ebo forest area, research camps and surrounding villages.

RESULTS

Bed structures

Of the 222 beds recorded along transects and trails between January 2006 and December 2007, 24 were ground beds of which 6 were night beds (Fig. 3). The Ebo chimpanzees constructed their beds mostly on steep slopes and rugged terrain probably because of night hunting by humans prevalent in the forest.

Termite fishing by chimpanzees

Discarded termite fishing tools were observed on epigeal and subterranean nests across the Ebo forest (Fig. 4). As this activity has not been observed directly in the Ebo forest, we are reluctant to speculate on how exactly it is carried out. We have, however, noted two combinations of instruments: stout long straight sticks and flexible leaf midribs, similar to those found in the Goulougo Triangle in Congo⁵.

Nut cracking by chimpanzee

The Ebo chimpanzees were observed cracking *Coula edulis* nuts in 2005⁶, an activity hitherto thought to be limited to communities west of the N'zo Sassandra River in Côte d'Ivoire⁷. The target species for nut

cracking was *Coula* nuts. The Ebo chimpanzees have never been observed to crack open oil palm (*Elaeis guineensis*) nuts like the Bossou chimpanzees in Guinea⁸. Oil palms are common throughout the forest, and the red soft outer layer is widely consumed by the chimpanzees. So far, nut cracking sites have only been identified on the western side of the Ebo River. Four tool combinations for cracking *Coula* nuts have been observed in the Ebo forest: wooden anvil and wooden hammer, stone hammer



Fig. 3. Fresh chimpanzee night-ground bed (photograph by EEA).



Fig. 4. Termite fishing sticks on a subterranean termite bed (photograph by EEA).



Fig. 5. Stone hammer and anvil (photograph by EEA).

and wooden anvil, stone hammer and stone anvil (Fig. 5) and stone hammer without anvil.

Sympatric gorillas

Gorillas were first sighted in the Ebo forest in November 2002. This gorilla population is biogeographically interesting as it occurs less than 100 km north of the Sanaga River, the geographical barrier between the Western Lowland gorilla to the south and the Cross River gorilla to the north². The gorilla population is sympatric with chimpanzees around the Moupon area. From 2005 and 2007, ten groups of 31 gorilla beds were recorded 22 of which were tree beds ranging between 0.5 m to 20 m in height. The ground beds were constructed of vegetative matter on rocks or bare ground and in a couple of occasions, the gorillas were observed to have slept on bare soil alongside ground and tree beds.

Outreach programs

The population of the 19 villages surrounding the Ebo forest generate income largely from the commercial trade in bushmeat. This coupled with local and commercial logging activities are the main threats to the forest and fauna of Ebo. Hunters spend several days in the forest and on their return to the village; they sell the bushmeat to intermediaries commonly called 'buyam sellams' who in turn supply the cities. The 'buyam sellams' come in hired taxis, motorcycles and sometimes timber trucks based on appointments with the hunters. Outreach programs were an integral part of the EFRP. Four workshops for hunters from Ebo villages were organized at the Limbe Wildlife Centre for mammal identification and comprehension of the national and international wildlife law. Three primate film shows centred on the behavioural ecology of chimpanzees and gorillas were organized in three villages. Formal and informal discussions on environmental issues were regularly held in the villages and primary schools.

DISCUSSION

The long-term goal of the Ebo Forest Research Project is to secure the population of chimpanzees, gorillas and other large endangered mammals of the Ebo forest. We are working on this through active research coupled with regular contacts with communities that use the forest resources. Today we have two permanent research stations (Bekob and Moupon) in the Ebo forest and the third (Njuma) will be operational in January 2009. We are collaborating with the Government of Cameroon and Wildlife Fund for Nature Coastal Forests Programme for the gazettelement of the Ebo forest into a national park. More international networking, collaboration and commitment are required to promote the research and conservation of the endangered species in the Ebo forest, including the Nigeria-Cameroon chimpanzee.

Acknowledgements. Research and conservation in the Ebo forest is funded by the Zoological Society for San Diego, the Offield Family Foundation, the United States Fish and Wildlife Service (USFWS), Great Ape Conservation Fund, the USFWS African Elephant Conservation Fund and the Margot Marsh Biodiversity Foundation. In Cameroon, we work under authorisation from the Government of Cameroon's Ministry of Forestry and Wildlife and the Ministry of Scientific Research

and Innovation. Our in-country partners include the Wildlife Conservation Society, and WWF Coastal Forests Programme Cameroon. We are grateful to the Ebo Forest Research Project staff, chiefs and villages surrounding the Ebo Forest. Special thanks to Professor Tetsuro Matsuzawa (Director of the Primate Research Institute of Kyoto University) for inviting EEA to the HOPE/SAGA symposium to introduce our research and for reading and commenting on earlier drafts of this manuscript.

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